

SESSION 2

Management of RSA

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MANAGEMENT OF ROAD SAFETY AUDITS

**Road Safety Audit Seminar
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by

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**Figure References: Introducing Road Safety Audits and Design
Safety Reviews, pages 12, 20 & 30**

THE INVOLVED PARTIES

- **Project Owner**
- **Design Team**
- **Safety Audit Team**

ROLES AND RESPONSIBILITIES

PROJECT OWNER

- **Express Commitment to Road Safety**
- **Support Commitment with Funding, Time, and Resources**
- **Accept Road Safety Audits as Essential Quality Management Requirement**
- **Inform Design Team About the Role of Audits**
- **Commission Road Safety Audits at Appropriate Project Stages**
- **Contractually Retain Safety Audit Team**
- **Attend Start-Up and Results Meetings**
- **Facilitate Response to Audit Findings & Recommendations**

ROLES AND RESPONSIBILITIES

DESIGN TEAM

- **Constructive Cooperation with Audit Team**
- **Provide Drawings, Reports Affecting Design**
- **Attend Start-Up and Results Meetings**
- **Assess the Audit Recommendations**
- **Respond to Audit Recommendations - Formal Report**
- **Modify Design and Proceed to Next Stage**

ROLES AND RESPONSIBILITIES

SAFETY AUDIT TEAM

- **Manage Expectations at Start-Up Meeting**
- **Constructively Review Design and Make Recommendations to Enhance Safety**
- **Focus on Safety - Avoid Feeding Frenzies**
- **Avoid Unnecessary Delays to Project**
- **Prepare Audit Report - Formal Document: Brief Description of Concerns (& Recommendations)**
- **No Re-Design**
- **Present Audit Report at Results Meeting**
- **Review Design Team's Response Document in Preparation for Next Audit Phase**

SAFETY AUDIT TEAM: MANAGING EXPECTATIONS

- **Essential When Process Is New**
- **Audit Team Primary Source of Knowledge**
- **Need to Educate Both Owner and Design Team**
- **Lay Out the Process, Roles, Responsibilities At the Outset**
- **Emphasize Objective: A Better Project Through Informed Decision Making**
- **Explicitly De-Emphasize Peer Review Aspects to the Design Team**
- **Describe Audit Report: What to Expect**
- **Stress Need for Formal Response: What to do with Audit Recommendations**
- **Emphasize that Ultimate Ownership and Responsibility of Design Rests with Design Team**

THE PROJECT OWNER'S NEED FOR AUDITS: RECONCILING THE DESIGN TEAM'S ROLE WITH THE AUDIT PROCESS

- **Design Pressures**

- Capacity Requirements**
 - Right-Of-Way Limitations**
 - Geotechnical Conditions**
 - Environmental Considerations**
 - Socio-Economic Considerations**
 - Archaeological Issues**
 - Budget Constraints**

- **Design Standards Traditionally Represent Safety**

- Minimums Typically Applied**
 - Combinations of Minimums**
 - Age of the Standards**
 - Creative Standards Bending**

Safety Audits are Required to Bridge the Gap Between Design Pressures and Design Standards to Ensure that Safety is Not Unnecessarily Compromised

SAFETY AUDIT TEAM: CONCEPTS IN CONDUCTING THE AUDIT

- 1. Relative Safety Concepts: Exposure, Risk, and Consequence
-- report page 7.**

Narrow rural road with sharp curves, low volume and no side-barrier protection

Freeway with high volume and wide run-off area

- 2. System Failure Concepts: Driver, Road, and Vehicle**

The Driver is always in the Vehicle prior to Failure

The Vehicle is always on the Road prior to Failure

- 3. Geometric Design Concepts: Horizontal, Vertical, and Cross-Sectional Elements**

- 4. Traffic Control, Operations and Maintenance Concepts**

- 5. Human Factors Concepts: Control, Guidance, and Navigation**

- 6. Real World Concepts: Weather, Light, and Modes**

The understanding of the safety relationships within each of these concepts, and the safety inter-relationship between the concepts, is what the Safety Audit Team sets out to do.

THE RESPONSE REPORT

- **Formal and ESSENTIAL Document - Part of Project Record.
Key to avoiding Legal Concerns.**
- **Brief, Concise, Focussed**
- **Document the Design Team's Response to the Safety Audit
Team's Concerns**
- **Indicate Selected Course of Action in Response to Each
Safety Audit Recommendation**
- **Important to Rationalize the Valid Trade-Offs Involved in the
Decision Making, Particularly when Audit Recommendations
are Not Being Adopted into the Design.**

Examples of Trade-Offs:

Environmental Impacts

Socio-Economic Impacts

Right-Of-Way Limitations

Time Limitations

Standards / Policy

Budget Constraints

- **Best Prepared by the Design Team in Consultation with
Owner Soon After Audit Report is Submitted**